



State of Utah  
Department of Natural Resources  
Division of Oil, Gas and Mining

## Coal Regulatory Program Directive

Directive Number:  
Tech - 005

Effective Date:  
July 23, 1998

Supersedes: None  
July 1, 1997

Subject: **Review and Interpretation of Water Monitoring Data**

Approved: \_\_\_\_\_ Lowell P. Braxton, Acting Director, Division of Oil, Gas, and Mining

### **DISCLAIMER**

*“This non-binding directive is intended for internal direction for the Utah Coal Regulatory Program to clarify the implementation of the Utah Coal Rules. It neither confers rights nor imposes obligations on the Division or any other party. In the case where a conflict is perceived to exist between this directive and the Utah Coal Rules, the rules prevail.”*

### **ABSTRACT**

The Utah Coal Regulatory Program (CRP) requires all mines to develop a Probable Hydrologic Consequences (PHC) section of their permit which describes the anticipated impacts that coal mining and reclamation activities will have upon the quality and quantity of surface and ground water for the proposed permit and adjacent areas. The PHC is based on information gathered from the mine’s water monitoring programs and other research and studies. The Division uses the PHC to determine the Cumulative Hydrologic Impacts of all coal mining activities in the general region.

This technical analysis guideline supplements the Utah Coal Rules on water monitoring. Its purpose is to supplement existing procedures as related to the CRP processing of water monitoring data including the availability of records, and follow-up actions as necessary.

### **Table of Contents**

1. Purpose .....	2
2. Policy .....	2
3. Procedure .....	2
4. Delegated Responsibility .....	3
5. Reporting Requirements .....	3
6. References .....	3
7. Effects on Other Documents .....	3
8. Division Contact/Work Group .....	3
9. Key Words .....	3
10. Appendices	
Appendix A: Regulatory Basis .....	4
Appendix B: Definitions .....	5
Appendix C: Implementation Schedule .....	6

## **1. Purpose**

This technical analysis guideline supplements the Utah Coal Regulatory Program (CRP) requirements for water monitoring. Its purpose is to supplement existing procedures as related to the CRP processing of water monitoring data including availability of records, and follow-up actions as necessary.

Implementation of this directive will ensure an established process of timely review and written findings by the Division regarding the impacts of mining on the hydrologic balance in the permit and adjacent areas under the provisions of the Utah Coal Regulatory Program (CRP).

## 2. Policy

The Division of Oil, Gas and Mining as related to permitted coal mines and preparation plants will continue:

- 1) to be the official repository for ground and surface water data as required by the Utah Coal Rules, including review and analysis of water data.
- 2) to protect waters from the possible adverse impacts of coal mining.
- 3) to take corrective or mitigative action so far as practicable when waters are known to be adversely impacted by coal mining, and,
- 4) to identify positive hydrologic aspects of coal mining.

## 3. Procedure

A. The Permittee will continue submitting water monitoring data to the CRP as specified in the permit.

B. The CRP will continue to convert the manual water data system to an electronic system to assist in a more timely review and analysis of water data. This will be included as Appendix C, a future appendix to this directive. It will address an implementation time table, and data deviation parameters as related to implied issues, and provide for improved records availability to the public.

C. The CRP will review incoming water quality data within 30 days of receipt to identify implied issues and evaluate alleged problems.

D. The CRP will contact the permittee for analysis of the data or implied issue. Issues resulting from a citizen's complaint will continue to be processed as outlined in R645-400-242 and R645-400-211 et seq.

E. If an explanation is presented and satisfies the CRP, then a memo will be prepared and filed into that mine's water quality file (Folder #7).

F. If no solution or explanation is acceptable, the issue is brought forth to the CRP in-house peer review group and the permittee. If an explanation is agreed upon within this group then a memo will be prepared and filed in that mine's water quality file (Folder #7).

G. If no explanation is acceptable under step 3F, development of an Action Plan will be recommended and a findings letter will be issued. The action plan may be initiated between the permittee(s) and Division through verbal and written agreement or through issuance of a Division Order if the Division determines a Division Order is necessary to attain prompt cooperation. A copy of the findings and an action plan, or the Division Order will be forwarded to all parties of interest.

H. The Action Plan is developed by the permittee and submitted to the Division. Development of the Action Plan at this step does not preclude involvement by the parties of interest.

I. The Action Plan is forwarded to parties of interest.

None

J. The CRP and the permittee will evaluate and report to the parties of interest on the effectiveness of the Action Plan.

## 8. Division Contact/Work Group

Hydrology Working Group: Ken Wyatt, James Smith, Sharon Falvey, Dave Darby, Mike Suflita, and successors.

## 4. Delegated Responsibilities

Each section below represents the appropriate section under part #3 Procedure.

- A. Permittee/ CRP Reclamation Hydrologist
- B. CRP Reclamation Hydrologist/Permittee
- C. CRP Reclamation Hydrologist
- D. Reclamation Hydrologist/Hydrology Working Group Lead/Inspector
- E. Reclamation Hydrologist/Permit Supervisor
- F. Hydrology Working Group Leader
- G. Permit Supervisor/ Associate Director/ Director
- H. Permittee/DOGM
- I. Permit Supervisor/ Associate Director
- J. CRP/Permittee

## 9. Key Words

ground water monitoring, hydrology, hydrologic balance, surface water monitoring, electronic transfer, Probable Hydrologic Consequences, Cumulative Hydrologic Impact Assessment.

## 10. Appendices

APPENDIX A: Regulatory Basis  
 APPENDIX B: Definitions  
 APPENDIX C: Implementation time table, data deviation parameters (to be developed)

## 5. Reporting Requirements

- 3.E: Memo to Water Quality File (#7)
- 3.F: Memo to Water Quality File (#7)
- 3.G: The findings letter or Division Order will be forwarded to Parties of Interest.
- 3.H: Action Plan received from permittee.
- 3.I: Action Plan forwarded to all parties of interest.
- 3.J: Effectiveness of Action Plan evaluated and reported to all Parties of Interest

## 6. References

R645 rules

## 7. Effect on Other Documents

## APPENDIX A Regulatory Basis

### R645-103-433.200 Records

The Division will make the record available to the public for inspection free of charge and for copying at a reasonable cost during normal hours at the main office of the Division.

**R645-301-731. General requirements ...**”The plan will be specific to the local hydrologic conditions. It will contain the steps to be taken

during coal mining and reclamation operations through bond release to minimize disturbances to the hydrologic balance within the permit and adjacent areas, to prevent material damage outside the permit area; to support approved postmining land use in accordance with the terms and conditions of the approved permit and performance standards of R645-301-750; to comply with the Clean Water Act (33U.S.C. 1251 et seq) and to meet applicable federal and Utah water laws and regulations....”

**R645-301-731.211** ...“The plan will provide for the monitoring of parameters that relate to the suitability of ground water for current and approved postmining land uses and to the objectives of protection of the hydrologic balance set fourth in R 645-301-731. It will identify the quantity and quality parameters to be monitored, sample frequency and site locations....”

**R645-301-732.212**....“Ground water will be monitored and data will be submitted at least every three months for each monitoring location...”

**R645-301-731.221**....”The permit application will include surface-water monitoring plan”.....”The plan will provide for the monitoring of parameters that relate to the suitability of the surface waters for current and post-mining land uses and to the objectives for the protection of the hydrologic balance...”

**R645-301-731.223**...”Surface water monitoring data will be submitted at least every three months for each monitoring location...”

**R645-300-122.200.** Written objections to an application for a permit, significant revision to a permit under R645-303-220, or renewal of a permit under R645-303-230 may be submitted to the Division by any person having an interest which is or may be adversely affected by the decision on the application, or by an officer or head of any federal, state, or local government agency or authority, within 30 days after the last

publication of the newspaper notice required by R645-300-121.

**R645-303-233.200.** Burden of Proof. In the determination of whether to approve or deny a renewal of a permit, the burden of proof will be on the opponents of renewal.

**R645-301-731.800.** Water Rights and Replacement. Any person who conducts SURFACE COAL MINING AND RECLAMATION ACTIVITIES will replace the water supply of an owner of interest in real property who obtains all or part of his or her supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source, where the water supply has been adversely impacted by contamination, diminution, or interruption proximately resulting from the surface mining activities. Baseline hydrologic information required in R645-301-624.100 through R645-301-624.200, R645-301-625, R645-301-626, R645-301-723 through R645-301-724.300, R645-301-724.500, R645-301-725 through R645-301-731, and R645-301-731.210 through R645-301-731.223 will be used to determine the extent of the impact of mining upon ground water and surface water.

**R645-400-211**.... “A citizen may request a Division inspection under UCA 40-10-22 by furnishing to the Division a signed, written statement (or an oral report followed by a signed, written statement) giving the Division reason to believe that a violation of the State Program or any applicable permit or exploration approval has occurred, and including a phone number and address where the citizen can be contacted.”

**R645-400-212**....”The identity of any person supplying information to the Division relating to a possible violation or imminent danger or harm will remain confidential with the Division if requested by that person, unless that person elects to accompany the inspector on the inspection, or unless disclosure is required under Utah or federal law.”

**R645-400-213....** “If a Division inspection is conducted as a result of information provided to the Division by a citizen as described in R645-400-211, the citizen will be notified as far in advance as practicable when the inspection is to occur and will be allowed to accompany the authorized representative of the Division during the inspection. Such person has a right of entry to, upon, and through the coal exploration or coal mining and reclamation operation about which he or she provided information, but only if he or she is in the presence of and is under control, direction and supervision of the authorized representative while on the mine property. Such right of entry does not include a right to enter buildings without consent of the person in control of the building or without a search warrant. All citizens so visiting mine sites are required to comply with applicable MSHA safety standards.”

**R645-400-214....** “Within 10 days of the Division inspection or, if there is no inspection within 15 days of receipt of the citizen's written statement, the Division will send the citizen the following:

214.100. If an inspection was made, a description of the enforcement action taken, which may consist of copies of the Division inspection report and all notices of violation and cessation orders issued as a result of the inspection or an explanation of why no enforcement action was taken;

214.200. If no Division inspection was conducted, an explanation of the reason why; and

214.300. An explanation of the citizen's right, if any, to informal review of the action or inaction of the Division under R645-400-240.”

**R645-400-215....** “The Division will give copies of all materials in R645-400-214 within the time limits specified in that Rule to the person alleged to be in violation, except that the name of the citizen will be removed unless disclosure of the citizen's identity is permitted under R645-400-212.”

**R645-400-242....** “The Director will conduct the review and inform the person, in writing, of the results of the review within 30 days of his or her receipt of the request. The person alleged to be in violation will also be given a copy of the results of the review, except that the name of the citizen will not be disclosed unless confidentiality has been waived or disclosure is required under Utah or federal law.”

## APPENDIX B

### Definitions

#### A. Definitions from Coal Rules R645

“**Adjacent Area**” means the area outside the permit area where a resource or resources, determined according to the context in which adjacent area is used, are or reasonably could be expected to be adversely impacted by proposed coal mining and reclamation operations including probable impacts from underground workings.

“**Hydrologic Balance**” means the relationship between the quality and quantity of water inflow to, water outflow from, and water storage in a hydrologic unit such as a drainage basin, aquifer, soil zone, lake or reservoir. It encompasses the dynamic relationships among precipitation, runoff, evaporation, and changes in ground and surface water storage.

“**Permit Area**” means the area of land, included on the approved map submitted by the operator with his or her application, ..... which will include the area on which the operator proposes to conduct coal mining and reclamation operations under the approved permit, including all disturbed areas.

#### B. Definitions for purposes of this Directive

“**Action Plan**” is a written statement to conduct activities to investigate and resolve the hydrologic issue identified. An Action Plan may include but is not limited to the following: study, investigation, increased or additional monitoring, and mitigation.

“**Parties of Interest**” as related to this guideline means one having a legal right and whose right may be, or has been, directly affected.

## **APPENDIX C**

### **A. Implementation Time Table**

### **B. Data Deviation Parameters**

This section will be developed during summer and fall 1997 using information in the DOGM Water Quality database to determine parameter specific thresholds for action.

### **C. Records Availability**

Water monitoring data is classified as public information and is available for review during normal working hours at the Division of Oil, Gas, & Mining Salt Lake Office public records room.